VI. "The Tubercular Swellings on the Roots of the Leguminoseæ." By H. MARSHALL WARD, M.A., F.L.S., Fellow of Christ's College, Cambridge, and Professor of Botany in the Forestry School, Royal Indian College, Cooper's Hill. Communicated by Prof. M. FOSTER, Sec. R.S. Received April 25, 1887.

(Preliminary Note.)

The author finds that the tubercles on the roots of the Leguminoseæ are due to the action of a parasitic fungus. Not only has he produced the tubercles by infection from without, but he has also found the infecting agent, and repeatedly seen and figured the infecting hypha passing down inside a root-hair and across the cortex of the root into the young tubercle. Here the hyphal branches bud off yeast-like cells, which are extremely minute and numerous, and resemble bacteria at first sight; they differ in their mode of multiplying by budding.

The action of these minute germ-like bodies causes the protoplasm of the cells of the root to assume plasmodium-like characters, and induces the flow of nutritive substances to these cells, and hypertrophy results. On the decay of the tubercles, the germ-like bodies pass into the soil (where they can always be found) and infect other roots; it is very probable they may be of extreme importance in agriculture.

VII. "The Proteids of the Seeds of *Abrus precatorius* (Jequirity)." By SIDNEY MARTIN, M.D. Lond., Fellow of University College, London, and Pathologist to the Victoria Park Hospital. Communicated by Prof. E. A. SCHÄFER, F.R.S. (From the Physiological Laboratory, University College, London.) Received April 21, 1887.

The proteids of the seeds of Abrus, the Indian liquorice, are important physiologically, because they have been shown (by Warden and Waddell*) to be possessed of poisonous properties. To the poisonous product extracted by these observers the name "abrin" was given; and though it was decided that abrin was closely allied to "plant-albumin," yet no experiments were recorded to show whether the product was a mixture or a single proteid. They obtained it by

* 'The Non-bacillar Nature of Abrus-poison.' By C. J. H. Warden and L. A. Waddell. Calcutta, 1884.